

Strategies to Reduce Fleet Emissions...

UNH's Coordinated Transportation Approach



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Campus Image

There are three distinct and differentiating images:

New England village



New England college



New England landscape



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Systems Approach

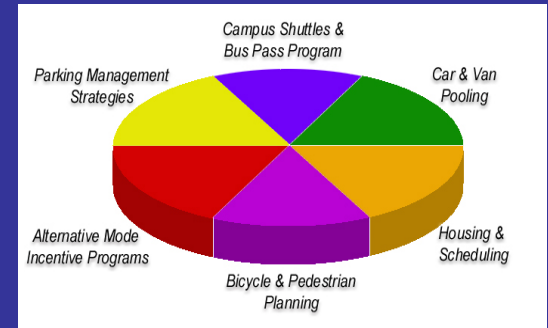
- Sustainability ⇔ Climate Education ⇔ Transportation Systems
- After heat and electricity, fleet fuel consumption and personal commuting are the biggest energy uses and emission generators at UNH.
 - Eco-Line™ deals with first two items....Today, an overview of our transportation and alternative fuel efforts
- We are approaching the issue with a series of institutional practices, transportation system choices, demonstration of new technologies and general community education



Evolving Transportation Policy

Leadership and Community Dialog

- **2001 Transportation Demand Management Policy**
 - dialog on transportation choices, costs and impacts on land-use, climate and energy
- **2004 Campus Master Plan** - reinforces walking campus
- **System Improvements Yield Positive Results:**
 - Transit **↑ 100%** since 2001 - >1.1 million trips last year
 - Amtrak Downeaster **↑ 500%** - >50,000 this year
 - **2004-2006 UNH fleet fuel consumption:**
 - Gas and petroleum diesel **↓ 10%**
 - CNG **↑ 10x** displacing >12,000 gallons gas/diesel
 - Biodiesel (B20) introduced 2006 - **saved 11,000** gallons petroleum diesel
 - Increasing hybrid and electric vehicles in our fleet (demonstration of EVs)
 - **Parking Permits** - flat or down in last years
 - **Ongoing improvements** to short-term access, campus transit standards



20 Year Master Plan Context

Reducing Commute trips (VMT) and emissions
through on-Campus Housing

Population Component	2002 Base	2012 Build Projection	2022 Build Projection
Faculty/Staff (all commute)	3,320	3,400	3,520
Graduate (all commute)	2,150	2,325	2,500
Undergraduate Population:	10,850	11,450	12,000
On-Campus undergraduate housing	5,610	6,400	7,200
On-Campus family/graduate housing	333	420	566
Commute population Faculty/Staff <i>plus</i> students <i>minus</i> on-campus housing	10,377	10,355	10,254

***Reduced traffic and emissions due to
significant increases in on-campus housing***



Coordinated Efforts

Energy-Transportation – Climate Education

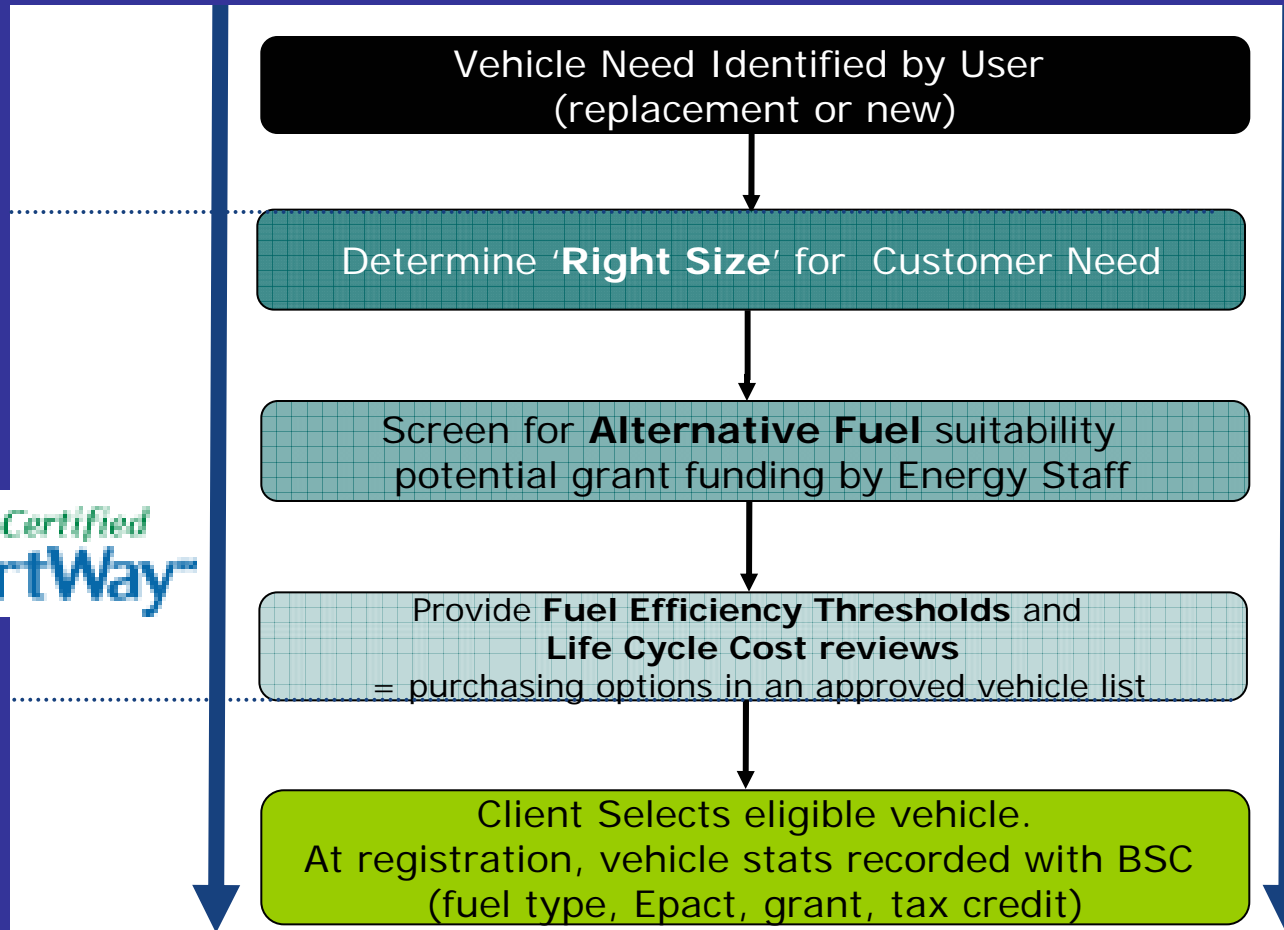
- **UNH Clean Fleet Programs**
 - Eco-Cat alternative fuel
 - B20 Biodiesel transition
 - CNG for on-campus
 - Enterprise hybrid fleet
 - Right-sizing and AFV use
- **DOT/DOE/EPA Partnerships** on high visibility successful projects
 - Over **\$6.5 million** of USDOT and USDOE funds leveraged for transit, rail station, ped/bike and alternative fuel projects
- **Investment in Transit**
 - Leveraged USDOT funds
 - Voluntary student investment
 - Expanded free community transit
 - Cost-effective utilizing student drivers
 - Largest transit agency in state
 - Projected 1 million trips removing over 4 million VMT in 06-07



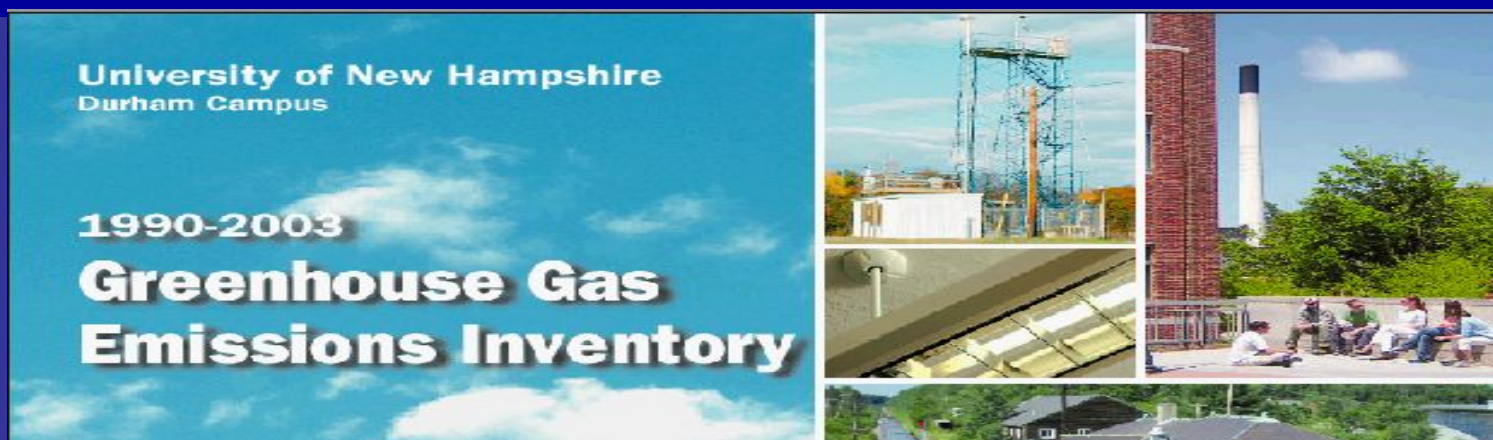
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Institutionalizing Choices:

Clean Fleet Practices and Policies



Fleet Fuel Consumption and Emissions



UNH - Durham Fleet Fuel Consumption FY 2004-2006

	Transit Gallons Diesel/Gas	Transit CNG therms	Plant & Animal Sciences Gallons Diesel/Gas	Non- Transit Gallons Diesel/Gas	Non- Transit CNG therms	UNH Total Gallons Diesel/B20 /Gas	UNH Total CNG Therms	TOTAL
2004	91,961	387	15,687	118,463	787	210,424	1,174	211,598
2005	81,981	15,548	14,292	106,336	3,887	188,317	19,435	207,752
2006 ¹	83,600	15,145	16,700	120,000	3,786	220,300	18,931	222,000
Change 04-06	-9%	+40X	+6%	+1%	+5X	+5%	+10x	+5%%

2007 data will show B20 transition



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Fuel Efficiency

Next Steps

- Fulfill Mandates and meet/exceed State/Fed and UNH Goals
 - Governor's Executive Order re Fuel Efficiency and EPA Act
- Demonstrate leadership as part of Climate Education Initiative
- Formalize Vehicle Choice Policies incorporating life-cycle and emissions
- Utilize selection/analysis procedures from EPA Smart Way programs
- Improve benchmarking and fleet mgmt
- Continue Clean Fleet & Eco-Cat.
- Continue AFV infrastructure research, support and investment and public demonstration



Transportation Improvements Underway

New Transit Fleet – Ongoing

\$1.5 million of new clean fuel vehicles since 05

Main Street-East (2007)

\$1.9 million street redesign improved bike/transit

Rail Station (2007)

\$913,000 renovation and transit improvements

CNG Station/Garage Upgrade (2007-8)

\$900,000 renovation and transit improvements

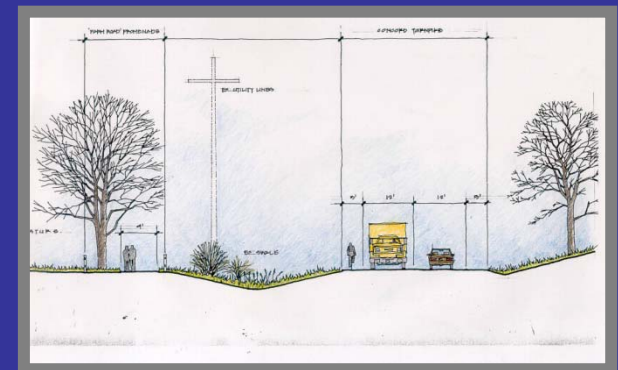
Main Street-West (summer 09)

\$350,000 multi-use trail/sidewalk to west edge



Next Steps?

- McDaniel Drive Extension to Main St.
- Conant Courtyard
- Parking Consolidation
- College Way



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